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**DIRECTIONALLY-ADJUSTABLE ANTENNA SYSTEM USING AN  
OUTSIDE MIRROR FOR AUTOMOTIVE APPLICATIONS**

**ABSTRACT**

A vehicle antenna system incorporated into at least one side-view mirror of a

5. vehicle includes a forward directed antenna and a rearward directed antenna to transmit and receive signals over corresponding forward and rearward-directed detection fields, respectively. The antennas act as directional transmitters and/or receivers, and a processing circuit discriminates between signals from different antennas without requiring any of the antennas to transmit identification signals to the
- 10 processing circuit. Signal discrimination is conducted in part by sequentially selecting each antenna to obtain a corresponding antenna signal and, if required for a particular application, comparing the obtained signal with previously obtained antenna signals. The vehicle antenna system can be used, for example, in conjunction with tire pressure sensors to detect low tire pressure in a particular tire.

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